Investigating a Drop in User Engagement

Case study:

Company Information:

Yammer analysts are trained to constantly consider the value of each individual project; they seek to maximize the return on their time. Analysts typically opt for less precise solutions to problems if it means investing substantially less time as well.

They are also taught to consider the impact of *everything* on the company at large. This includes high-level decision making like choosing which projects to prioritize. It also influences the way analysts think about metrics. Product decisions are always evaluated against core engagement, retention, and growth metrics in addition to product-specific usage metrics (like, for example, the number of times someone views another user's profile).

Yammer's Analyst is responsible for triaging product and business problems as they come up in many cases, these problem surface through key metric dashboards that execs and managers check daily.
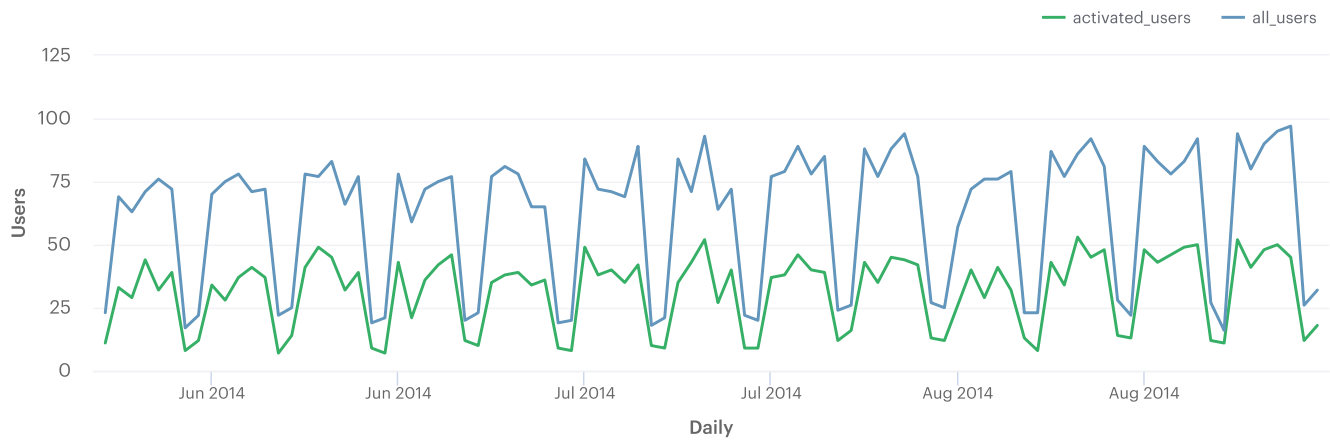
Problem:

On Tuesday morning, September 2, 2014. The head of the Product Development team asked me what do I think our latest internet activity in user engagement on our site.

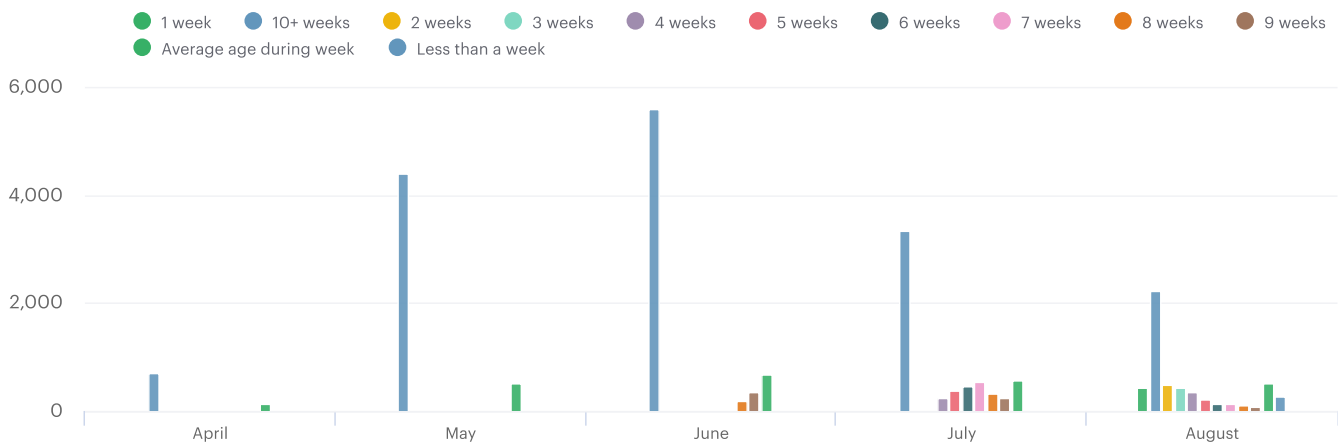Below, you'll see the weekly active users engagement on our site:

Weekly Active Users
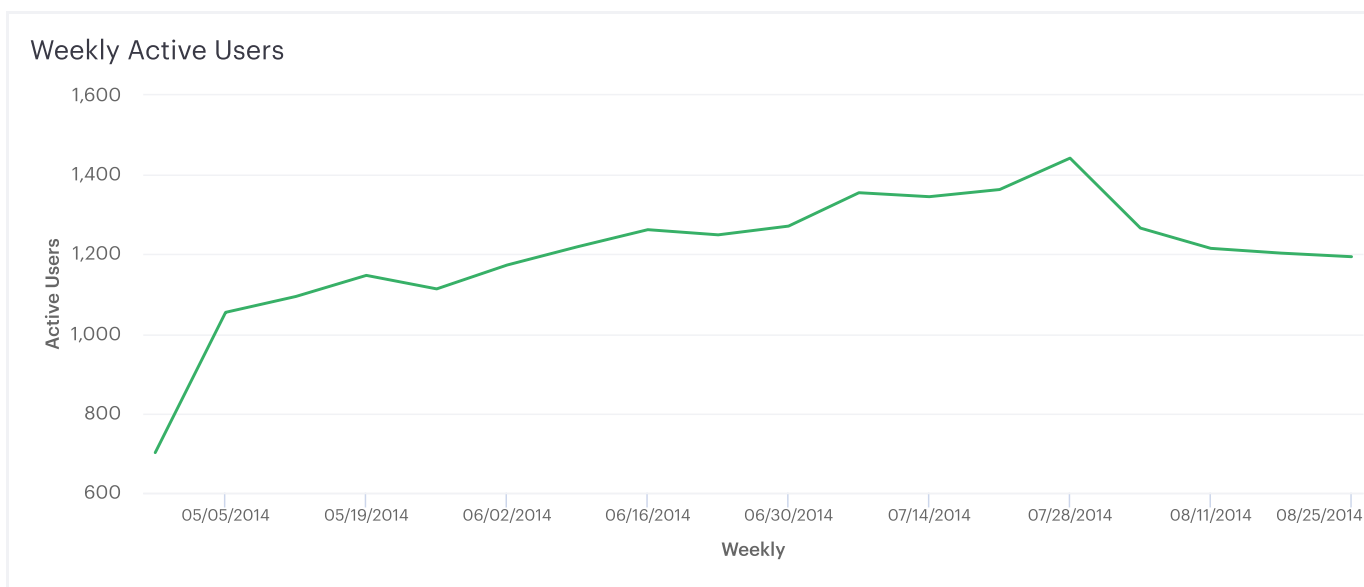
No changes in the growth rate, it continues to be high during the and low on the weekends:

Daily Signups

In this chart, you will see decreased engagement among users who signed up more than 10 weeks prior:

Engagement by User Age Accomplice

Legend: 1 week · 10+ weeks · 2 weeks · 3 weeks · 4 weeks · 5 weeks · 6 weeks · 7 weeks · 8 weeks · 9 weeks · Average age during week · Less than a week


Understanding that the problem is localized to older users leads us to believe that the issue most likely isn't related to a one-time spike from marketing traffic or a variable affecting new traffic to the site such as being blocked or changing rank on search engines. Below you'll see the various engagement by device types:

Weekly Engagement by Device Category
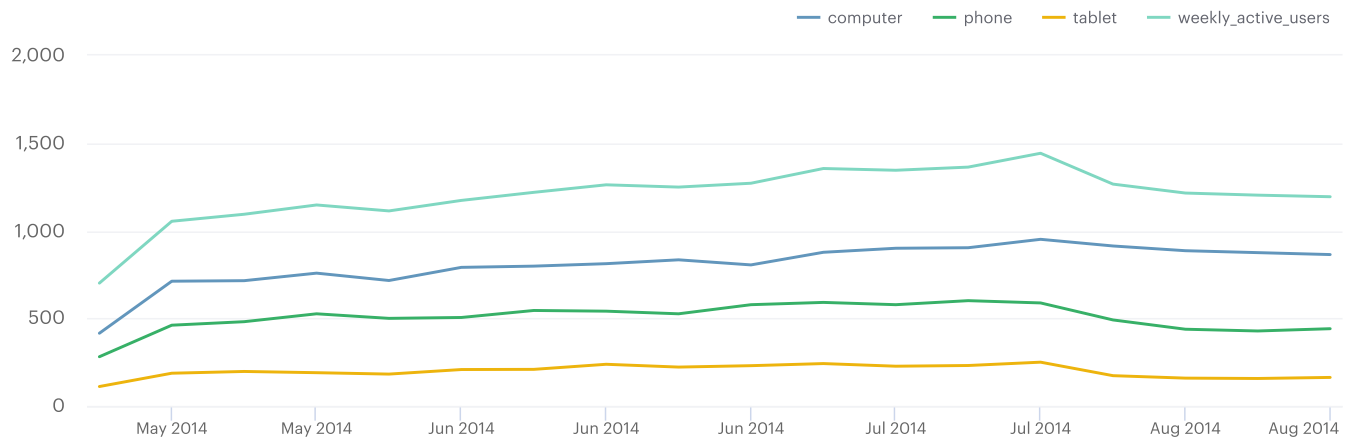
The chart reflects a steep drop in phone engagement rates, so it's likely there's a problem with the mobile app related to long-time user retention. At this point, you're in a good position to ask around and see if anything changed recently with the mobile app to try to determine the problem. You might also consider what causes people to engage with the product. The purpose of the digest email mentioned above is to bring users back into the product. Since we know the problem relates to the retention of long-time users, it's worth a review to determining the email has something to do with it:

Email Actions
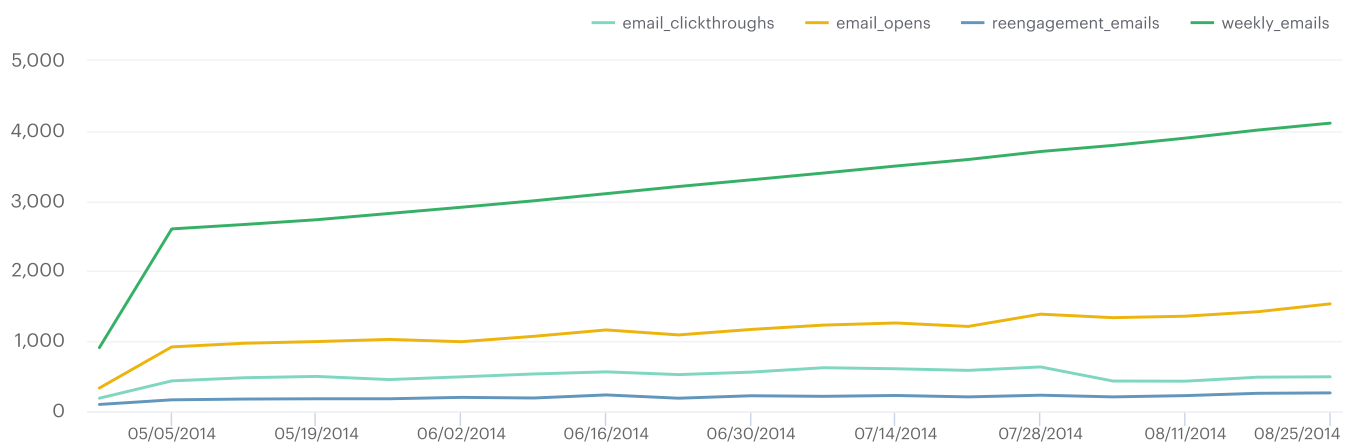
Conclusion:

After investigation, it appears that the problem has to do with mobile use and digest emails. The intended action here should be clear: notify the head of product (who approached you in the first place) that the problem is localized in these areas and that it's worth checking to make sure something isn't broken or poorly implemented. It's not clear from the data *exactly* what the problem is or how it should be solved, but the above work can save other teams a lot of time in figuring out where to look.